

# Dysphonia information sheet

## Background

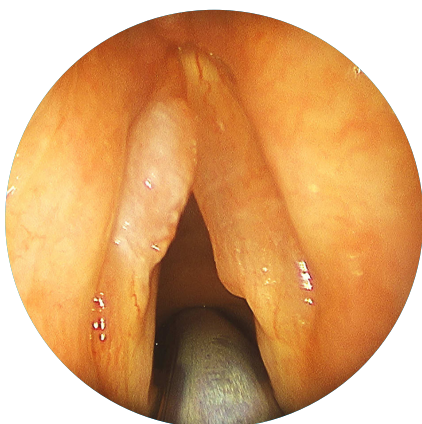
Dysphonia, often referred to as a 'hoarse voice', refers to an alteration in voice quality, pitch or loudness. It is a common presentation across all age groups and may be associated with other laryngeal symptoms related to swallow and breathing. Structural and functional causes are present and often inter-related. Assessment and treatment often requires both an Ear, Nose & Throat (ENT) Surgeon and Speech Pathologist.

## Clinical features

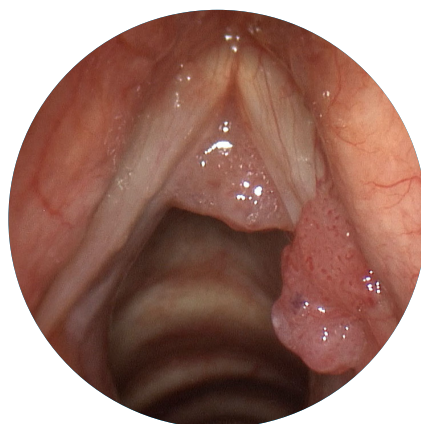
Causes of dysphonia include the patient's vocal load (speaking and singing demands) as well as preceding phonotraumatic events, upper respiratory tract infections, reflux disease, hay-fever and medications such as corticosteroid inhalers. Iatrogenic injuries in the context of thyroid or cardiac surgery must also be considered, as does prior intubation and neurologic disease. The time course of dysphonia in paediatric patients is pertinent, whether the condition has been present since birth or more recently. Finally and most importantly, risk factors for malignancy must be sought, including alcohol and smoking.

History relates to the time course of dysphonia, both duration of the problem and any fluctuations throughout the day. Aside from questions relating to precipitating factors, as described above, associated symptoms to assess include throat clearing, cough, globus, dysphagia and dyspnoea. Patients may describe aspiration on thin fluids, which suggests vocal fold paresis, whilst those with progressive dysphonia and symptoms such as haemoptysis may harbour malignancy and require an urgent referral for endoscopy.

Examination entails characterisation of the main vocal abnormality, including roughness, breathiness, weakness and strain. Gaining an appreciation of these features is challenging. A 'wet' sounding voice may indicate concurrent dysphagia. Neck examination is important to assess for lymphadenopathy, focal tenderness and any scars from previous surgery.



**Vocal cord  
leukoplakia**



**Laryngeal papilloma**



**Vocal cord polyp**

## Investigation and treatment

Given the wide variety of dysphonia types and causes, endoscopy by an ENT Surgeon is paramount to guide further management. Typically white-light endoscopy is performed, however specialist centres also provide stroboscopy, where an artificial representation of the mucosal wave of the vocal fold is achieved by staggering images of the larynx with a strobe light. The role of endoscopy is to assess for anatomical lesions such as polyps, nodules, cysts, papillomata and malignancy, as well as functional disorders including vocal fold paresis, spasm as well as muscle tension and tremor. Sometimes there is evidence of inflammation related to reflux or candidiasis and other times there may be oedema and haemorrhage related to over-use. Investigations may include a CT scan of the neck and chest in vocal fold palsy/paresis, or occasionally an electromyogram of the recurrent laryngeal nerve. For those with concurrent dysphagia or reflux features, a videofluoroscopic swallow study and/or 24-hour dual probe pH/impedance testing may be performed. Patients with suspicious lesions or those not responding to appropriate voice therapy may require microlaryngoscopic surgery to further assess and treat the vocal cords.

**With many underlying causes, treatment is variable. Generally, however, management includes:**

- Vocal hygiene measures
  - Adequate hydration, voice rest when possible, avoiding stress, treating underlying allergies or reflux, avoiding shouting or throat clearing/cough, quitting smoking
- Voice therapy with a Speech Pathologist
  - Includes voice exercises, breathing exercises, improving vocal efficiency, reducing laryngeal hypersensitivity and reducing laryngeal tension
- Surgery
  - Vocal cord paralysis – Procedures to augment the affected vocal cord can be done endoscopically or through a small incision in the neck
  - Vocal cord lesions – Microlaryngeal surgery to excise lesions, benign and malignant
  - Laser – This can be used to divide laryngeal webs or target prominent vessels that cause vocal fold haemorrhage

**In patients with refractory dysphonia despite treatment, repeat endoscopy may be required to rule out malignancy**

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